



2023 IMPACT REPORT



# A LETTER FROM THE CEO

Dear Friends of Jocotoco,

Ecuador is the smallest of the ten most biologically diverse countries in the world. It is home to thousands of endemic species of plants and animals that don't exist anywhere else. From the Amazon rainforests to the wind-swept Andean peaks, into the wet Chocó and the dry Tumbes, and across the ocean to the Galapagos, the flora and fauna here are breathtaking. Because of all of these factors, protecting nature in Ecuador is particularly impactful and important.

This incredible diversity of life, however, is at risk. More species are going extinct than we can count. The impacts of climate change become more and more evident as each year passes. In Ecuador, the natural world and the people that depend on it face these threats. But, working hand in hand with you, we can bring hope.

Together, we have proven that we can change this trajectory, the decline in wildlife, the loss of nature. Jocotoco protects some of the world's most endangered species and ecosystems every single day. In fact, this year marks our 25th anniversary, a testament to our success and longevity. After 25 years, we now protect and manage 16 reserves that cover more than 96,000 acres (39,000 ha), while we cooperatively manage another 188,000 acres (76,000 ha) of private and communal reserves. Combined, this area is larger than New York City. We have planted more than 1.7 million trees using 140 native species. We recently helped establish and create a management plan for a new 23,000-square mile (60,000 km²) marine reserve connecting the Galapagos with Cocos Island in Costa Rica.

Our impact is clearly visible. In only 25 years, the length of one human generation, natural regrowth in Canandé Reserve, our largest

reserve, has resulted in wildlife returning to once desolated places in a diversity that matches that seen in old-growth rainforests. The same reserve supports the only healthy population of Jaguars in western Ecuador. In the Ayampe Reserve at the Pacific coast, we increased the number of sea turtle nests at least twelve-fold in 10 years, and the number of young turtles reaching the ocean every year has increased 100-fold. Against the odds at our Yunguilla Reserve, we quintupled the world's only population of the Pale-headed Brushfinch within nine years. Our Chakana Reserve supports 30% of all the Andean Condors found in Ecuador.

In 2023 alone, we expanded the 16 reserves that we protect and manage by an astounding 16,500 acres (6,700 ha). We protected land in the lowland Chocó rainforests, Andean cloud forests, and high Andean plains. We planted nearly 22,000 trees on our reserves. We invested \$14.5 million in conservation, more than any previous year.

On Floreana, the sixth largest island in the Galapagos, 2023 is a turning point in perhaps the most ambitious and important rewilding effort on a tropical island. Jocotoco has eradicated nearly all introduced predators, such as rats and mice. The reintroduction of the Floreana Giant Tortoise will begin soon, to be followed by the reintroduction of many other species of wildlife only found here.

In 2023 in the Chocó, located in Ecuador's northwest, we expanded our Canandé Reserve by nearly 11,000 acres (4,500 ha). It is now more than 38,000 acres (15,000 ha) in size. We also secured the highest level of protection possible in Ecuador for portions of the reserve by adding them to the national system of protected areas. Botanists there identified hundreds of possible new species of plants, demonstrating that

the Chocó has a concentration of unique biodiversity greater than even the Amazon.

Let's now look ahead. Our 10-year strategy (2023-2033) is driven by the realization that Jocotoco needs to achieve regional conservation successes across entire landscapes if we are to stem the tide of biodiversity collapse and the climate crisis. Some of these regional strategies are described in more detail later in this report.

The underpinning of Jocotoco's success is our combination of vision, pragmatism, and the integration of world-class science. We will continue to collaborate with researchers from all over the world. We use state of the art monitoring techniques. We use technology and artificial intelligence to save plants and animals from extinction. We won't be afraid to course correct when we learn something new.

Community leadership fuels our success. We will continue to listen first to the people who live where we work, including the incredible diversity of indigenous communities across Ecuador. Many of our staff grew up in the villages around our reserves, sometimes literally on the former pastures that now form part of our reserves. Their passion and knowledge are irreplaceable.

This success will also be because of you. Our accomplishments are your accomplishments.

You may have seen news about violence in some places in Ecuador in recent months. It is heartbreaking. I want you to know that we take the safety of our staff, communities, and guests seriously. I also want you to know that Jocotoco is a family, and we are strong. We draw strength from one other. We draw strength from the amazing communities throughout Ecuador. And

we draw strength from you. Nature is resilient, and so are we.

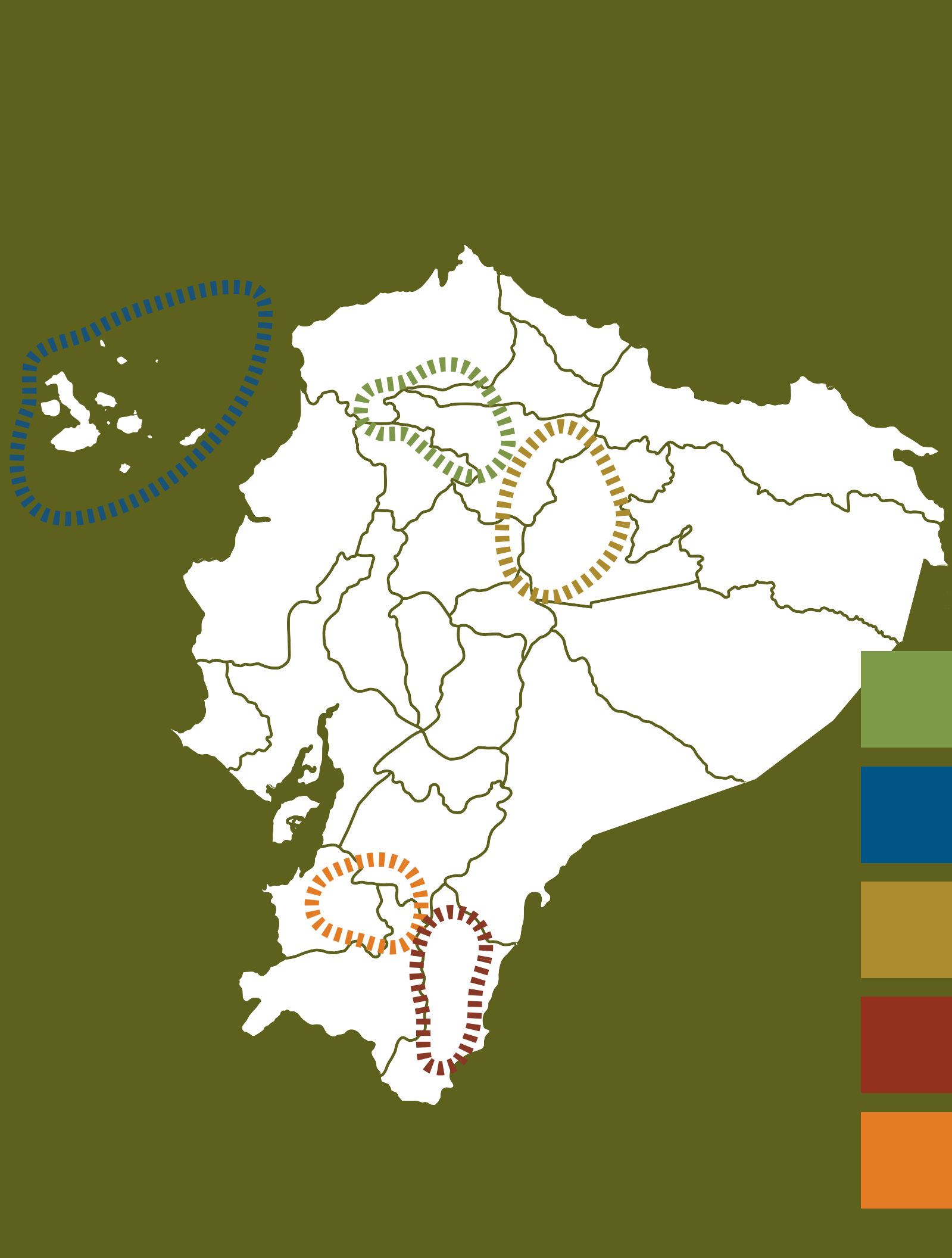
With gratitude,



Martin Schaefer, CEO



**As a country, Ecuador has the sixth most Conservation Imperative sites in the world. These are places that are unprotected but harbor rare and threatened species.** (Dinerstein / RESOLVE, et al., 2023)



## REGIONAL CONSERVATION

A decade ago, we realized we had to think beyond the borders of our reserves. Bears and Jaguars spent important parts of their lives in the valleys and mountains outside of our reserves. Our scientific research was telling us that even species that were confined to our reserves depended on other populations in the vicinity for maintaining high genetic diversity. Daily, weekly, and yearly migration cycles meant that we had to create ecological corridors across large landscapes. The communities around our reserves were telling us that rapid deforestation was harming them too, that their waters were drying up, and their soils were eroding away. These communities were also telling us that they wanted to be part of the solution, and that they could lead the way.

We identified five priority regions in which we can protect entire ecosystems:

**ECUADORIAN CHOCÓ**

**GALAPAGOS**

**AMAZON - ANDES**

**PODOCARPUS - EL CÓNDOR**

**CHUMBES**



A group of five people, three men and two women, are standing on a dirt path in a lush, green forest. They are all smiling and looking towards the camera. The person on the far left is a young man with curly hair, wearing a light-colored jacket over a dark t-shirt with a 'JOCO TOCO' logo. Next to him is a woman with dark hair, wearing a dark t-shirt with a 'JOCO TOCO' logo. In the center is a woman with long brown hair, wearing a dark t-shirt with a 'JOCO TOCO' logo. To her right is a woman with long brown hair, wearing a black tank top, blue jeans, and white rubber boots. On the far right is a man with curly hair, wearing a dark t-shirt with a 'JOCO TOCO' logo and dark pants. He is holding a silver thermos. The background is a dense forest with many trees and green foliage.

## JOCOAMBIENTE

Jocotoco's subsidiary company, called Jocoambiente, provides unique conservation services to our partners. Jocoambiente draws upon the decades of experience and passion of Jocotoco. Many partners need support in creating, protecting, managing, and restoring their reserves. Jocoambiente, through its partnership with Jocotoco, brings staff such as forest guards, biologists, and reforestation experts. It has infrastructure including research labs and plant nurseries. It has access to advanced technology that can help monitor biodiversity and conduct research.

Jocoambiente is another innovative solution that we bring to conservation; its revenues support Jocotoco's work. Jocoambiente will help us achieve regional conservation strategies, even beyond Ecuador's borders.



## ECUADORIAN CHOCÓ

The Chocó forests of northwest Ecuador form part of one of the ten most important biodiversity hotspots globally. While the Chocó is almost as diverse as the much better-known Amazon basin, it is far more threatened by rapid deforestation.

The Chocó lies between the Andes and the Pacific coast, and stretches from Panama, through Colombia, and into northwest Ecuador. It is astonishingly diverse. With more than 11,000 species of vascular plants, the Chocó is the floristic hotspot of the Americas. The Ecuadorian Chocó alone supports 900 species of birds, more than 8% of all bird species on Earth. The Chocó even surpasses the Amazon in the number of endemic and range-restricted species. The Chocó ecosystems in Ecuador also provide important benefits to the 1.2 million people living there, including clean, fresh water.

**Over the last two years, botanists have studied the trees of the Canandé Reserve in the Chocó. In only 38 acres (15 ha), they identified an astounding 550 species of trees (as many as in all of Europe). To everyone's amazement, they found an additional 300 tree 'types' that they could not identify. Many of these are likely species new to science.**







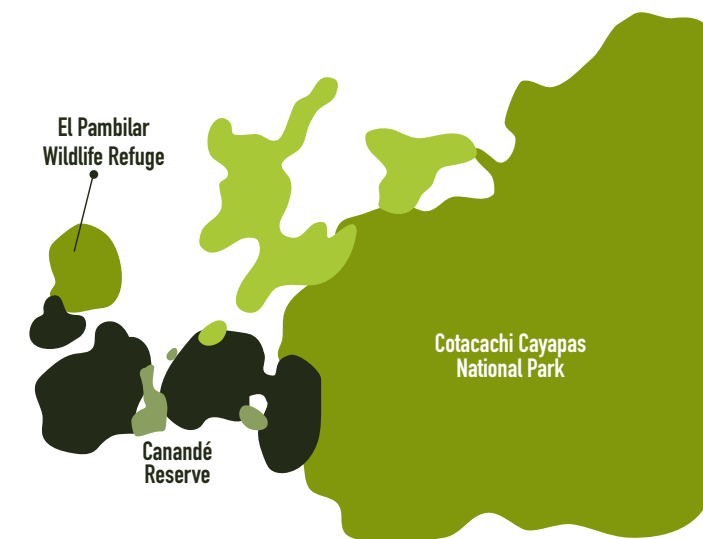
# LESS THAN 3% OF LOWLAND FORESTS REMAIN NOW

Unfortunately, the forests of the Chocó have been disappearing rapidly for nearly a century. The Ecuadorian Chocó was entirely forested in 1938, but by 1988, only 50 years later, 95% of the forests in western Ecuador below 3,000 feet (900 m) had already disappeared. There is a consensus that less than 3% of lowland forests remain now, and deforestation continues.

In 2023, we formulated a response to these threats: create a 'Ring of Defense' by buffering and connecting existing protected areas to form a contiguous conservation network spanning more than 1.2 million acres (500,000 ha). This is the only area in the western tropical Andes where the entire range of ecosystems can be protected from less than 200 feet above sea level to more than 16,000 feet (50-4,900 m) in elevation. Fortunately, we aren't starting from zero, and more than half of our target is already protected. The largest intact wilderness area that remains in the Ecuadorian Chocó is the 645,000-acre (261,000-ha) Cotacachi-Cayapas National Park. Our largest reserve, Canandé, along with indigenous reserves, private reserves, and less strictly protected governmental areas, buffer some of that national park. A series of private reserves, including our Yanacocha Reserve, protect higher elevation Andean forests further south closer to Quito.

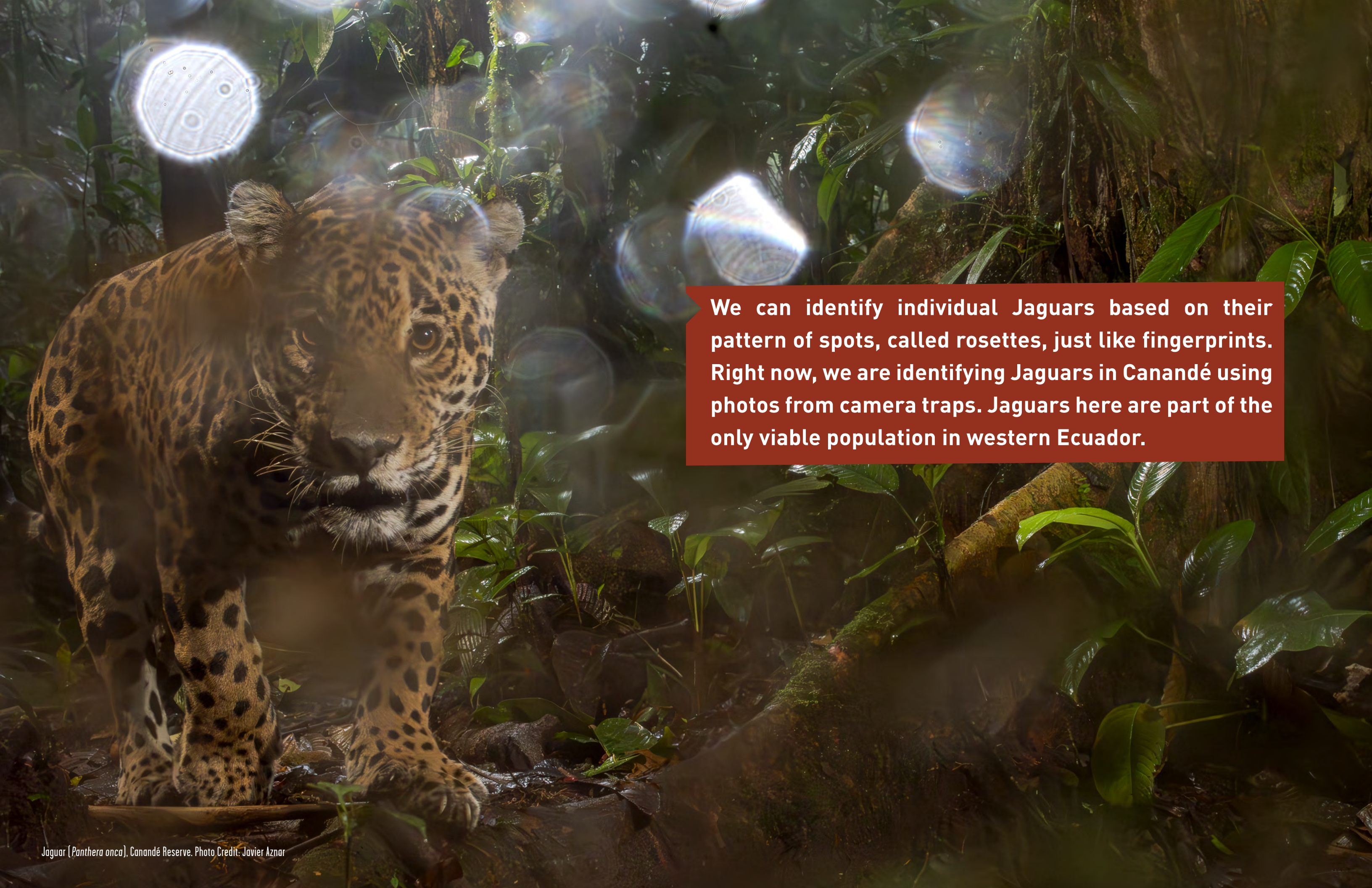
Just this year we added 11,000 acres (4,500 ha) to our Canandé Reserve, bringing its total size up to more than 38,000 acres (15,000 ha). Most importantly, portions of Canandé were added to the Sistema Nacional de Áreas Protegidas (SNAP), the national system of protected areas. While still owned and managed by Jocotoco, being part of the national system gives those portions of the Canandé Reserve the highest level of permanent, legal protection possible in Ecuador.

Over the coming years, we will add more portions of Canandé to SNAP. We will continue to expand existing reserves, strengthen the land rights and legal protections of indigenous communities, and reforest large swaths of farmland to connect all conservation areas.




-  **National Conservation Areas**
-  **Community Reserves**
-  **Jocotoco Reserve**
-  **Other Private Reserves**



A photograph of a jaguar in a lush, green jungle. The jaguar is standing and looking towards the camera. Its fur is covered in dark rosettes. Several circular overlays, resembling fingerprints, are placed on the jaguar's fur to illustrate the unique spot patterns used for identification. The background is filled with dense tropical foliage and tree trunks.

**We can identify individual Jaguars based on their pattern of spots, called rosettes, just like fingerprints. Right now, we are identifying Jaguars in Canandé using photos from camera traps. Jaguars here are part of the only viable population in western Ecuador.**





Completed in 2022, the Chocó Lab is the first scientific lab in the lowlands of the Ecuadorian Chocó. This state-of-the-art facility is located in our Canandé Reserve. We invite researchers and university groups from all over the world to join us and use this facility to study the amazing biodiversity of this region!

Top Right: Chocó Lab, Canandé Reserve. Photo Credit: Documencia





**JULIETA MUÑOZ** STRATEGY MANAGER

From beautiful beaches, across misty tropical rainforests, to snow-capped mountains, the natural wonders of Ecuador will have a deep impact on anyone who experiences them. That is very true for Julieta Muñoz, Jocotoco’s Strategy Manager. Her father was a pioneer in ecotourism and a nature lover. Julieta said, “Tagging along with my father on trips, I fell in love with the wildlife in Ecuador. Protecting it for the future became my higher calling.”

After receiving a degree in environmental science in Iceland, then working for her family ecotourism business, Julieta joined Jocotoco three years ago. Our ability to accomplish landscape-level conservation in places like the Chocó is due in part to her ability to connect all of the pieces of our work together, from high-level planning to on-the-ground implementation. Julieta ensures we are always thinking long-term. “I may not be around to see all of our impact, but generations from now, people will thank us for what we do today.”



*Augochloropsis Sp., Canandé Reserve. Photo Credit: Javier Aznar*



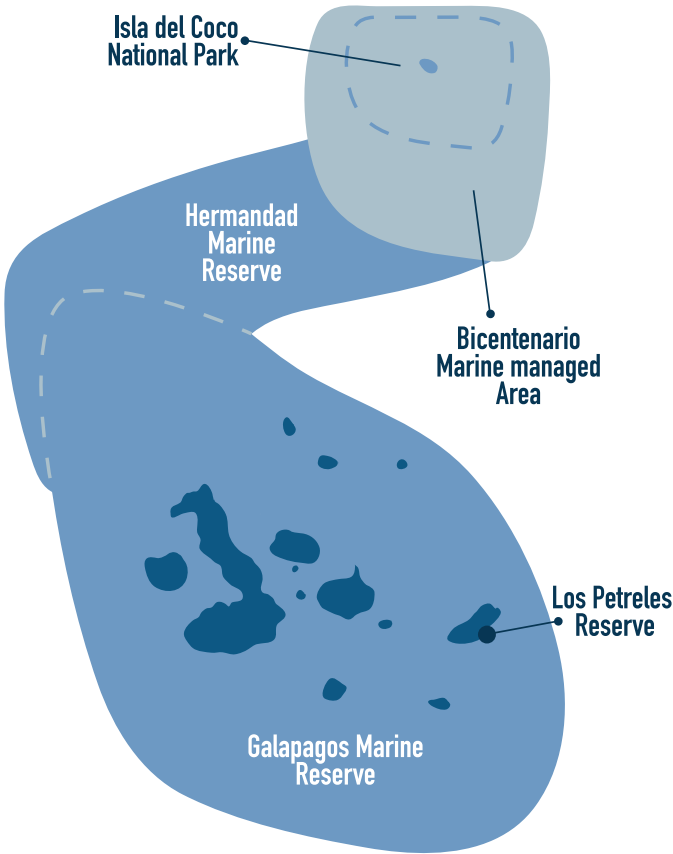


# GALAPAGOS

Volcanoes have been erupting violently from the floor of the Pacific Ocean 600 miles off the coast of Ecuador for millions of years. It was only 5-10 million years ago that these volcanoes finally reached the surface, and the Galapagos Islands as we know them emerged from the sea.

The iconic islands are famed for their biodiversity and have been a living laboratory for the study of evolution for nearly two centuries. The islands are close enough to the mainland that plants and animals have managed to find their way to them. The islands are far enough from the mainland and from each other that once plants and animals arrive, they become isolated and evolve into new and unique species.

Thousands of people live on the islands, and many thousands more visit every year. Much of the islands are protected by a national park. We created a reserve on San Cristobal, called Los Petreles, to protect the nesting grounds of the Critically Endangered Galapagos Petrel. The islands are surrounded by a marine reserve, created in 1998. In the last three years, we helped establish and then create a management plan for a new marine reserve connecting the Galapagos with Cocos Island in Costa Rica. Even with these levels of protection, many species are still threatened, and some have already disappeared. Today, invasive species are the biggest threat, and the most challenging to resolve.



- Galapagos National Park
- Marine Reserves Ecuador
- Protected Areas Costa Rica
- Jocotoco Reserve





**2023 marked a monumental turning point in the fight to save the rare and unique wildlife of Floreana**, the sixth largest island in the Galapagos. Generations ago, the first people on Floreana brought with them invasive predators, including rats and mice. While early whalers and pirates hunted out the Floreana Giant Tortoise, these introduced predators ate the eggs and young of Floreana's other wildlife, and many species disappeared. Some species clung to life only on small islets surrounding Floreana. There are at least 61 plant and animal species that are currently threatened with extinction on Floreana, more than on any other Galapagos Island.

Using advanced technology, we were able to locate the introduced predators, often hidden in the island's rocky, volcanic fissures. Drones with thermal sensors helped us find and track them. A camera trap grid took photos of them, pinpointing their locations, and an artificial intelligence program was able to identify them by species. We also used helicopters to access the most inaccessible parts of the island. By the end of 2023, nearly no invasive predators were left.

Invasive predator control is the precursor to the most important rewilding project on the Galapagos. Later this year, the endemic Floreana Giant Tortoise will be returned to the island. Thought to be extinct until descendants were found on a nearby island, the tortoise, through its foraging and seed dispersal, will restore habitat and set the stage for the reintroduction of other endemic species. This will include several species of Darwin's finches, the bright red Galapagos Vermilion Flycatchers, Floreana Mockingbirds, Lava Gulls, Barn Owls, Galapagos Hawks, and the Floreana Racer, a small snake.

Nearly 150 people live on Floreana today. The people on Floreana led the way and are already

benefiting from the work. Without rats and mice, their crop yields have gone up dramatically. The return of tortoises and birds will bring more visitors and more income from tourism. This is a win-win for people and wildlife.

The Floreana Island Restoration Project is led by the Galapagos National Park, the Galapagos Biosecurity Agency, and co-executed by Jocotoco with technical assistance from Island Conservation and scientific support from the Durrell Wildlife Conservation Trust and the Charles Darwin Foundation, among other national and international institutions.

**CLICK HERE TO  
DONATE TO RESTORE  
FLOREANA**

**By the end of 2023, nearly no invasive predators were left on Floreana, setting the stage for the most important rewilding project on the Galapagos.**

Floreana Island. Photo Credit: Marlon del Águila





# SCIENCE UNDERPINS OUR RESTORATION

Scientific study guides conservation, and Kirtana Kumar is on Floreana to do just that. Kirtana grew up in New Zealand and has worked in many places across the world. Today, she is a PhD student at the University of Würzburg in Germany. She said, “As a New Zealander, I saw first-hand the impact that invasive predators have on wildlife. A lot of the unique wildlife has disappeared or are limited to small, isolated populations, due to their vulnerability to introduced predators.” In New Zealand, many ground-nesting birds such as kiwis and reptiles such as the lizard-like tuatara are severely threatened by introduced mammalian predators. Kirtana just began a three-year research project on Floreana to study our rewilding efforts there.

Kirtana's scientific career has focused on researching invasive predator control tools and programs. She is especially interested in how programs on islands impact native reptiles. Kirtana will be testing the impact of the eradication on the endemic Lava Lizard and the wider Floreana food web. “Island eradication and restoration programs often neglect long-term, holistic ecosystem impact monitoring. Jocotoco wishes to set the foundation for this kind of research, however.” Kirtana added that, “the Lava Lizard is an integral part of the Floreana food web offering seed dispersal services and providing an important food item for native predatory species including those planned for reintroduction. With invasive predators removed, my research will give us insight on when it is the right time to reintroduce species that have been lost for generations. This research will help understand how eradications impact island food webs and ecosystems and aims to improve future island restoration projects around the globe.”



Lava Lizard (*Microlophus grayii*), Floreana. Photo Credit: James Muchmore



## ELIÉCER CRUZ

### DIRECTOR OF THE GALAPAGOS PROGRAM

For Eliécer Cruz, Jocotoco's Director of the Galapagos Program, Floreana is home. In fact, he was born and raised there. As far back as he can remember, he understood the significance of Floreana. "In the morning when I woke up, even as a child, I could feel how special Floreana and its wildlife were. As I got a little older, I realized that this unique heritage brought with it a unique responsibility to protect it." He knew that some animals on Floreana had disappeared, and that others were harder and harder to find every year. He also knew that he could change that.

Eliécer decided to devote himself to nature. A biologist by training, he made his way up to becoming the Director of the Galapagos National Park, a post he served for eight years. During his tenure, he established the Galapagos Marine Reserve. He served as the Secretary of Coastal-Marine Ecuador for three years. He was even appointed as the Governor of the Galapagos province and sat on the President's Cabinet as Minister of the Galapagos for two years. The list of his important work goes on and on.

Today, Eliécer is one of the most influential and accomplished conservationists in Latin America. His work with Jocotoco on Floreana brings him back to where it all started. It also reminds him why conservation matters. "Families on Floreana need nature. Wildlife tourism drives our economy. If we want to continue to fish offshore, the sea must be healthy. Even our farms do better when there are no invasive rats and mice eating our crops. What we do here, on Floreana today, is a model for the future of the rest of the world."







# AMAZON - ANDES

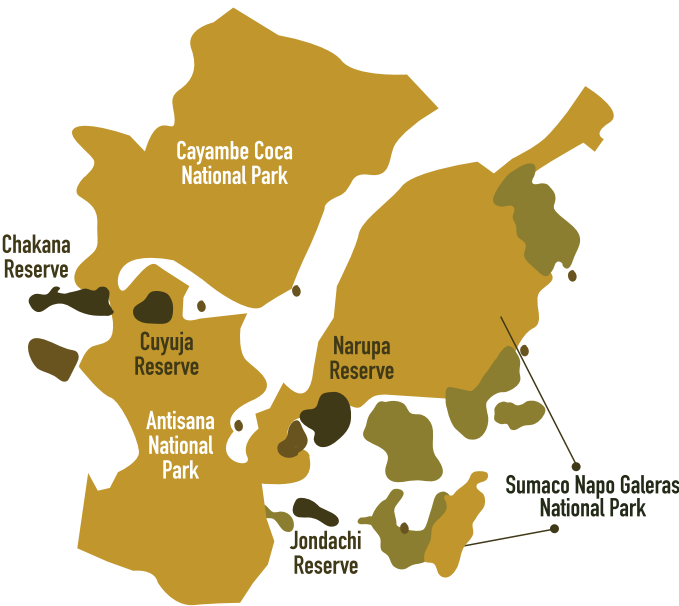
From glaciers at the tops of mountains three miles high (5 km), across active volcanoes, to the foothills of the Amazon rainforest and the winding Napo River, few regions offer landscapes that are as dramatically diverse as this one. Connecting and buffering existing reserves is a high priority, as deforestation is accelerating.

In 2023, we worked with communities to help build their capacity to monitor and patrol their reserves. This helps to ensure the long-term protection of these reserves. Training is also an important part of our work in the region. This includes training on basic farm management techniques, bird identification, the use of camera traps, and using citizen science tools like eBird and iNaturalist.

Given the short distance to Quito, the capital, the potential for tourism in this region is high. The recent discovery of a nesting pair of Harpy Eagles on one of the indigenous reserves has attracted visitors. Local communities are working to expand their own tourism services. We provided small investments and more extensive training on how to manage bird tourism in a responsible way, ensuring the safety of the wildlife that visitors are coming to see.

We work closely in the region with five indigenous communities that belong to the Kichwa and Kijo nations. Indigenous communities in Ecuador have traditionally been some of the best stewards of their lands. Many indigenous communities in Ecuador have enrolled portions of their territories in the Socio Bosque program. The federal government pays communities for maintaining their forests as forests. In future years, we plan to support indigenous communities in this region to expand enrollment in the program and increase payments for ecological services.

The year 2023 also saw Jocotoco rise to the forefront of technological advancements in conservation. We deployed 90 sound recorders in this region’s national parks, private reserves, and communal reserves to track biodiversity - songs of birds and other wildlife - and threats - the sound of chainsaws and hunting rifles. Our research showed that artificial intelligence can analyze and predict biodiversity very well. Once trained, countless hours of recordings are analyzed rapidly, ensuring replicability and scaling to an entire region. The data will enable us to identify the most important areas to protect. Moreover, we will use these data to integrate communal, private, and governmental reserves into one regional approach.



- National Protected Areas
- Kijos – Kichwa Community Reserve
- Jocotoco Reserves
- Other Private Reserves

Chestnut-fronted Macaw (*Ara severus*), Narupa Reserve. Photo Credit: James Muchmore

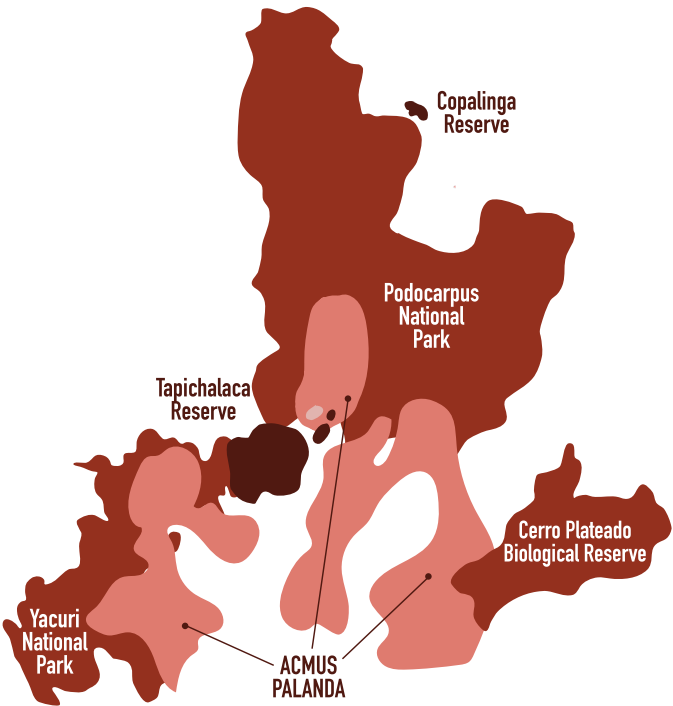


# PODOCARPUS - EL CÓNDOR

Located in southern Ecuador, this region is home to diverse Andean ecosystems, from the humid forests of El Cóndor mountain range, a mountain range older than the Andes, to one of the few dry forests of the Amazon in the Zumba Valley. Deforestation and mining still threaten this region.

In 2023 we added nearly 750 acres (300 ha) to the Tapichalaca Reserve. We hope to more than match that expansion in 2024. This expansion serves to provide connectivity between two disconnected national parks. It also reduces deforestation in the direct vicinity of those parks. We are now ready to add portions of Tapichalaca to the Sistema Nacional de Áreas Protegidas (SNAP), increasing protections for the reserve.

Our Tapichalaca Reserve, aside from being home to our namesake, the Jocotoco Antpitta, has a very high diversity of orchids and other endemic plants. In 2023, we started a mini-lab to propagate rare and highly threatened plants that we will establish in the reserve. One of the plants, a vine with a beautiful flower called *Bomarea longipes*, is Critically Endangered. It was first identified in the late 1800s but was later thought to have gone extinct. Amazingly, it was rediscovered within Tapichalaca Reserve in the early 2000s. This vine is still not known to exist elsewhere. We are bringing this plant back from the brink of extinction.



- National Conservation Areas
- Municipal Conservation Area
- Jocotoco Reserves
- Other Private Reserves

ECUADOR HAS MORE THAN 4,000 SPECIES OF ORCHIDS. OF THE MORE THAN 800 SPECIES OF FLORA IN TAPICHALACA, ORCHIDS COMPRISE THE MOST ABUNDANT FAMILY OF PLANTS.

*Pleurothallis* Sp., Tapichalaca Reserve. Photo Credit: James Muchmore







## JOCOTOURS

Would you like to visit Ecuador and see amazing wildlife and the ecosystems that support them? For more than a decade, our subsidiary company, Jocotours, has been offering all-inclusive travel experiences. Jocotours offers tailored services to suit your needs and interests, including transportation, lodging, and guided tours across Ecuador. Our reserves are open to visitors, and five of our reserves have beautiful lodges with everything you need for your stay. Jocotours can arrange your travel to anywhere in Ecuador, even if you're not staying in our lodges. Big groups or small, by yourself or with your family, university groups, birders, photographers, or both, we invite you to visit Ecuador with Jocotours. WHEN YOU TRAVEL WITH JOCOTOURS, ALL PROCEEDS GO BACK TO SUPPORTING JOCOTOCO'S CONSERVATION EFFORTS.

**FOR MORE INFORMATION, CONTACT JOCOTOURS AT +593 99 244 0038 OR [INFO@JOCOTOURSECUADOR.COM](mailto:INFO@JOCOTOURSECUADOR.COM).**

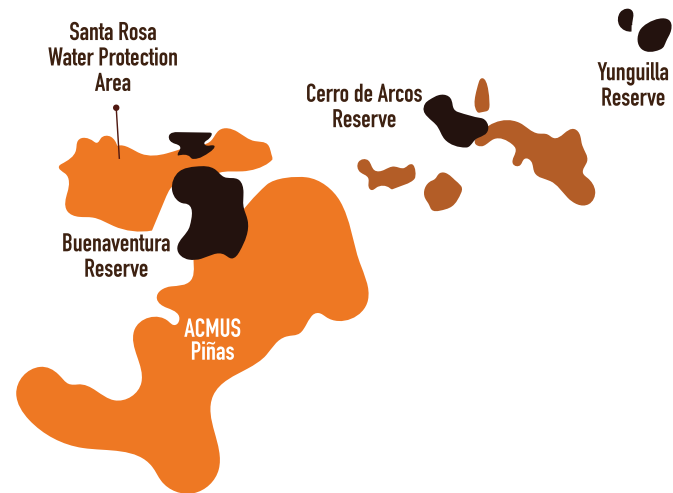


# CHUMBES

The Chumbes program covers a region where there is a unique blending of wet Chocó ecosystems with Tumbesian and Andean dry forests. Like its ecosystems, the Chumbes name itself is derived from combining the Chocó and Tumbes names together. The Rio Jubones carved a 2,000-meter-deep gorge through the middle of this region, creating a barrier to wildlife. The resulting islands in the sky host unique species that have been isolated for millennia. The pressures from agricultural expansion and mining here are severe.

In 2023, we expanded the Buenaventura Reserve by more than 1,400 acres (575 ha). Importantly, this expansion took the reserve up the mountain. The reserve now covers an altitudinal gradient from 1,300 feet (400 m) up to 7,300 feet (2,250 m) in elevation. Why does this matter? The climate is changing. As temperatures warm, species dependent on cool cloud forests move farther up the slope, including the endangered El Oro Parakeet. If we do nothing, these species will run out of habitat.

Protecting land at higher elevations throughout Buenaventura is not enough, however. We also must plant the forests of tomorrow. Most of the land in the reserve at higher elevations had previously been cleared for pastures. In the coming years we will reforest this land with tens of thousands of native trees. By acting now, we are restoring the forests that will be the climate refuge for numerous endangered species decades from now. We are preventing the extinction of many rare plants and animals clinging to life at Buenaventura.



- Municipal Conservation Areas
- Community - managed Páramo Grasslands
- Jocotoco Reserve

## SAVING THE EL ORO PARAKEET

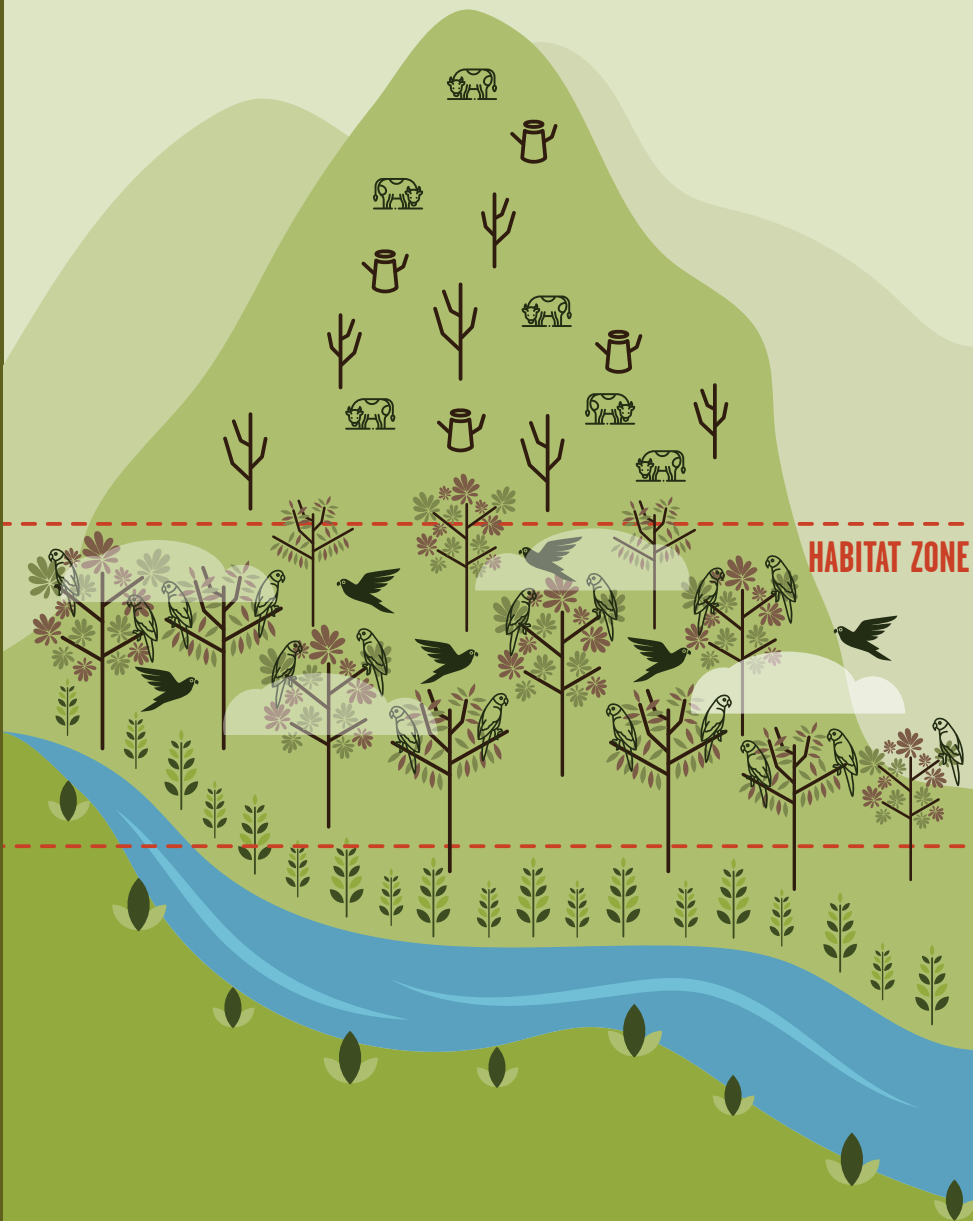
**Few people have ever seen the El Oro Parakeet. Its range is perilously small. Its historic habitat, forests in and around the mountains of El Oro Province in Ecuador - the gold province - have mostly been cut. At our Buenaventura Reserve, the El Oro Parakeet clings to existence, and is making a comeback. This is thanks to our work not only protecting and restoring its habitat, but also our work placing nesting boxes to emulate tree cavities once abundant in the region's lost old-growth forests.**





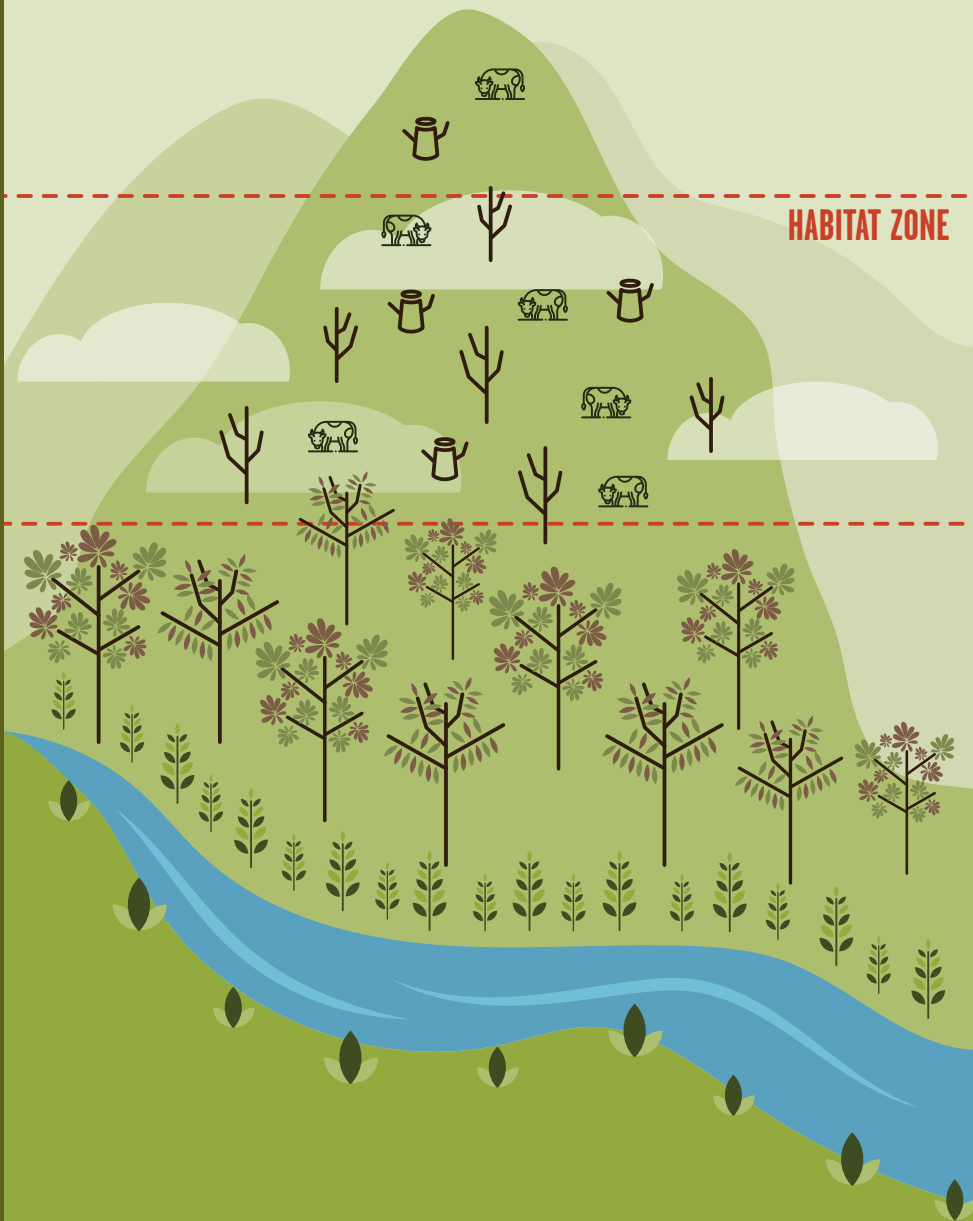
# 1 CONDITIONS AT BUENAVENTURA TODAY

Temperature and moisture conditions are perfect for the forests we see today. The El Oro Parakeet and other wildlife find their habitat in the forests at middle elevations on the mountain. Most of the forests have been cut for cattle pastures higher up the mountain.



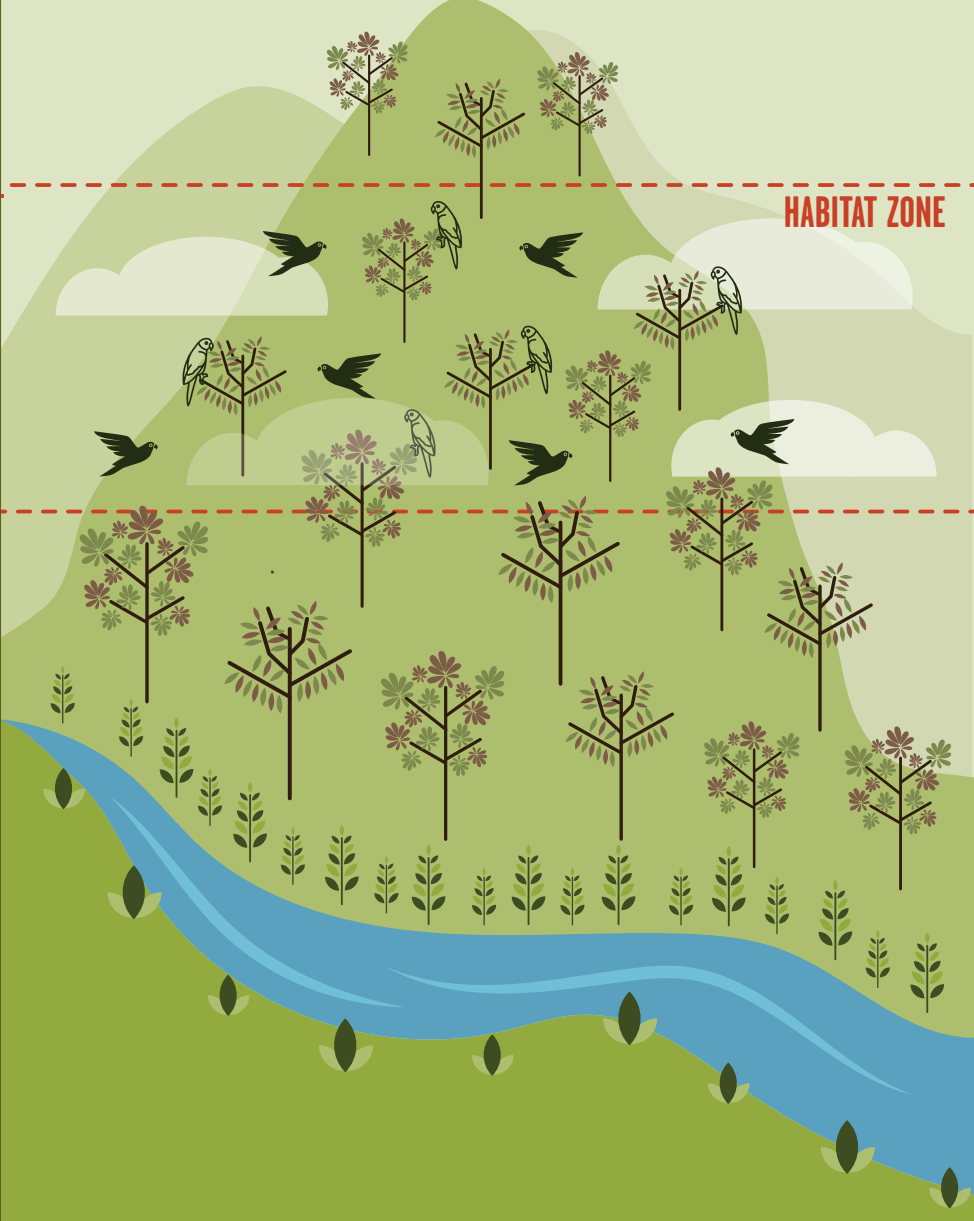
# 2 CLIMATE CHANGE IF WE DO NOTHING

As our climate changes, warmer temperatures move up the mountain. This changes habitat, forcing plants and animals to move up in elevation. If we do nothing, species moving up the mountain will find only degraded, cleared pastures. They will run out of habitat.



# 3 CLIMATE CHANGE WITH HABITAT PROTECTION AND REFORESTATION

To prepare for this future at Buenaventura, we are protecting land at higher elevations. Since most of the forests at higher elevations have been cut for pastures, we are also planting thousands of trees on newly protected lands. These will be the forests of tomorrow and will ensure the survival of many endangered plants and animals.

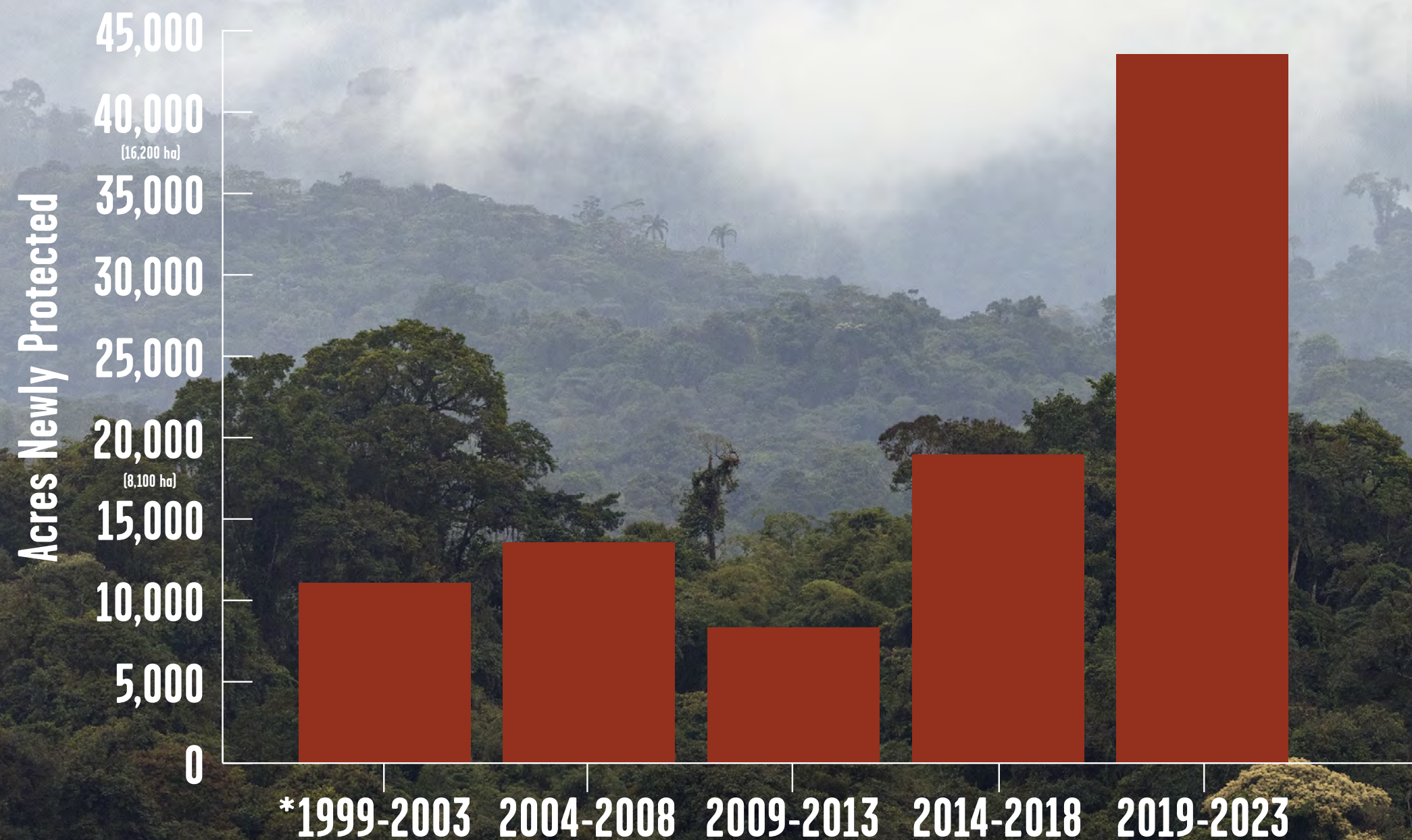






Flying between the tall grasses, shrubs, and colorful flowers of the high Andean páramo, the Blue-throated Hillstar was first discovered in 2017. This hummingbird only inhabits this small area located in the Andean region of southern Ecuador. Its total population was perilously small, estimated to be 80 to 100 individuals. We acted quickly and created the Cerro de Arcos Reserve in 2020 to protect some of its last remaining habitat. Today, we monitor its fascinating nesting sites – the walls of caves far off the ground. This beautiful hummingbird teeters on the brink of extinction, but its future, like the incredible iridescent blue plumage of its throat, is bright.





\*Includes a few early land purchases at Tapichalaca in 1998

Our reserves are home to an astonishing number of plants and animals: 1,200 species of birds, 153 species of mammals, 321 species of reptiles and amphibians, 1,321 invertebrates, 78 species of fungus, and 2,428 species of plants.

## EXPANDING OUR RESERVES

Our reserves are the beating heart of Jocotoco. Some are massive in and of themselves, some are the last standalone refuge for disappearing ecosystems, and some are steppingstones in a corridor of protected areas. Every reserve has its own unique story of people who worked tirelessly to protect them. Each is a victory for conservation, for the communities that surround them, and for the spectacular wildlife that depend on them. Expanding our reserves is essential for our future.

**After 25 years, we now protect and manage 16 reserves that cover more than 96,000 acres (39,000 ha). We are expanding our reserves faster and faster with each passing year.**







## RESTORING OUR FORESTS

Imagine yourself standing on a steep slope high above a ravine. You started that morning far below, hot and humid. Up here there's a chill in the air. You are shrouded in mist. Other than steady upwells of blowing wind, it is eerily silent. You came here looking for tropical cloud forests: rugged trees draped in mosses, covered in beautiful bromeliads.

Suddenly the winds shift, and the fog lifts. You're startled at what you see: nothing. Overgrazed pastures with rusty soils eroding away underneath. You were too late. These forests were cut a generation ago. But that's not how this story ends.

Across Ecuador we have proven that we can restore these forests. We collect seeds from native trees in remnant forests, then grow them in our own nurseries. We plant them in our reserves and in communal watersheds nearby. We take care of them once they are planted, ensuring their survival. We return degraded landscapes back to healthy, vibrant ecosystems.

When you return to that same barren mountainside years later, Jocotoco's work amazes you. The forest has come back to life. The trees we planted have grown back thick. Rare and endangered orchids and vines that we grew cover the branches. Birds, like the Pacific Royal Flycatcher, set up their territories. With Jocotoco, this is what the future looks like.

### **1.7 MILLION TREES PLANTED IN 25 YEARS - IN 2023 ALONE:**

- **Buenaventura: 8,220 trees planted in 22 acres (9 ha)**
- **Yanacocha: 1,000 trees planted in 2.5 acres (1 ha)**
- **Tapichalaca: 10,250 trees planted in 37 acres (15 ha)**
- **Las Balsas: 2,500 trees planted in 7.5 acres (3 ha)**

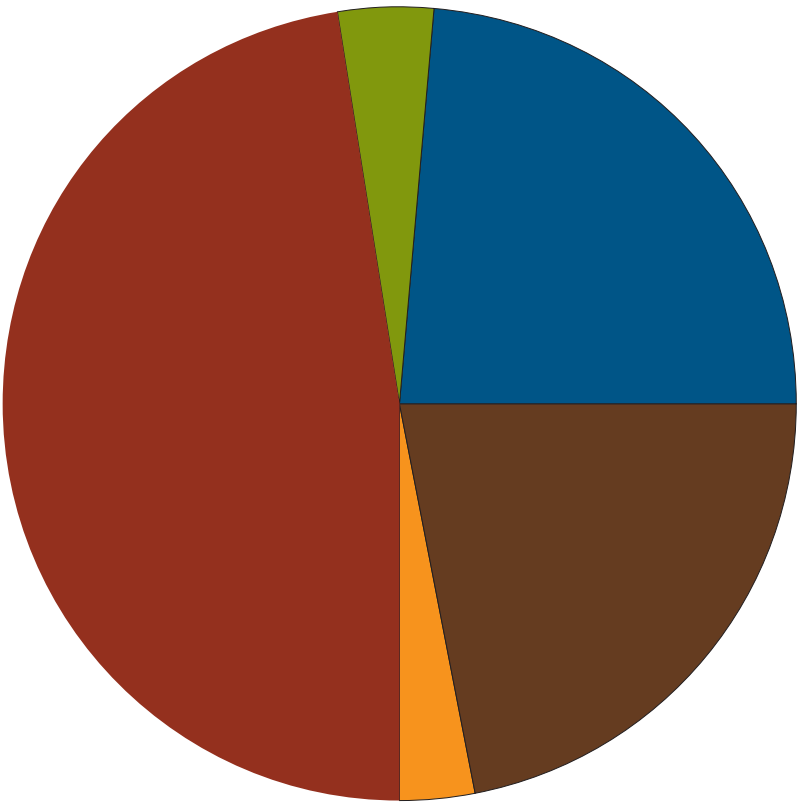


# JOCOTOCO’S FINANCES

Jocotoco grew from an annual budget of approximately \$2 million to approximately \$14.5 million within four years. In 2023, our core operating costs for managing our network of protected areas added up to \$ 2.4 million, while four-fifths of our budget was spent on three categories: \$3.6 million on land purchases to expand our reserves, \$6.5 million on the restoration of the Galapagos, and \$2 million on regional conservation programs in mainland Ecuador and species-specific conservation activities.

## STAFF BREAKDOWN

Reserve Guards	48
Restoration Staff	4
Field Staff	24
Office and Administrative Staff	22
International Staff	3



REVENUE	2023	2022
Restricted funds	\$10,036,904	\$4,989,551
Tourism	\$62,000	\$62,000
Environmental services	\$159,981	\$0
Land purchase and assets	\$3,625,764	\$3,220,721
Unrestricted funds	\$665,449	\$375,178
TOTAL REVENUE	\$14,550,098	\$8,647,450
EXPENSES		
Reserve management	\$826,840	\$797,435
Conservation projects	\$7,651,158	\$797,435
Conservation salaries	\$1,100,086	\$761,862
Administrative salaries	\$312,739	\$238,082
Administrative costs	\$200,191	\$152,007
TOTAL EXPENSES	\$10,091,014	\$4,828,139
LAND PURCHASE COSTS	\$3,654,858	\$3,220,721
TOTAL LAND ASSETS	\$23,450,013	\$19,795,155
Jocotoco Sustainability Fund (Canadian Dollars)	\$923,646	\$880,102
Jocotoco US Endowment	\$400,926	\$347,451

\*Notes:  
- The difference between revenues, expenses and costs is invested the following year.  
- The Jocotoco Sustainability Fund is held and managed by the International Conservation Fund of Canada (ICFC). The fund is a charitable purpose trust dedicated to the sole purpose of funding activities and staff positions to provide conservation stewardship, including ongoing maintenance and protection of conservation reserves owned by Fundación Jocotoco in Ecuador.







March Conservation Fund  
Maecenata Foundation  
Marlow Vogelpark  
Mohammed Bin Zayed  
National Fish & Wildlife Foundation - NFWF  
Nature and Culture International  
NovaCredit  
Ombar Chocolate  
Omer-Decugis & Cie  
Pew Bertarelli Ocean Legacy  
Panorama Global Fund  
Patagonia  
PayPal Giving Fund  
Pöschl Foundation  
Rainforest Trust  
Re:wild  
Quick Response Fund for Nature - QRFN  
Save the Chocó  
Scott Bieler Foundation INC  
Shearwater Foundation  
Silicon Valley Community Foundation  
Sinners Micro Cervecería  
Soleq Travel  
Tatoo Adventure Gear  
Terra Viajes Ecuador  
ThankU  
The L and L Family Foundation  
TiME - This is My Earth  
TRANSNAVE (Transportes Navieros Ecuatorianos)  
UK Online Giving Foundation  
US Fish and Wildlife Service - NMBCA  
Wilhelma Zoologisch-Botanischen Garten Stuttgart  
World Land Trust  
Zoological Society for the Conservation of Species and Populations - ZGAP

PARTNERS

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Amaru Bioparque Cuenca  
Aves y Conservación  
Centro de Rescate Jambelí  
Club de Surf isla Santa Cruz Galápagos  
Consejo de Gobierno de Régimen Especial de Galápagos  
Dirección del Parque Nacional Galápagos  
Escuela Politécnica Nacional  
Fondo para Control de Especies Invasoras para Galápagos  
Fondo para la Protección del Agua -FONAG  
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Fundación Ecos  
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Fundación Un Cambio por la Vida  
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Gobierno Autónomo Descentralizado Municipal de Palanda  
Gobierno Autónomo Descentralizado Municipal de Piñas  
Gobierno Autónomo Descentralizado Municipal de Santa Cruz  
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Gobierno Autónomo Descentralizado Parroquial de Cotundo  
Gobierno Autónomo Descentralizado Parroquial de Hatun Sumaco

Gobierno Autónomo Descentralizado Parroquial de San José de Payamino  
Gobierno Autónomo Descentralizado Parroquial Isla Santa María  
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Island Conservation  
Los Aliados  
Max Planck Institut für Chemische Ökologie  
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Naveducando / Programa Galapagos Infinito  
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WildAid

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Sachatamia ilex, Photo Credit: Javier Aznar





Critically Endangered - Blue-throated Hillstar (*Oreotrochilus cyanolaemus*).  
Photo Credit: James Muchmore



Endangered - Black-breasted Puffleg (*Eriocnemis nigrivestis*).  
Photo Credit: Chris Bell

**Jocotoco's reserves protect 116 species of hummingbirds. That's 32% of the world's 366 hummingbird species, and an astounding 86% of the 135 hummingbirds found in Ecuador.**



Least Concern - Violet-bellied Hummingbird (*Chlorestes julie*).  
Photo Credit: Doug Wechsler



Vulnerable - Esmeraldas woodstar (*Chaetocercus berlepschi*).  
Photo Credit: Murray Cooper





Andean Condor (*Vultur gryphus*), Chakana Reserve. Photo Credit: Meinolf Pues

## JOIN THE CONDORS, JOCOTOCO'S NEW LEGACY SOCIETY

You can join The Condors, Jocotoco's Legacy Society, by including Jocotoco in your planned giving. Planned giving is a fantastic way to ensure future generations will always be able to experience the wonders of the natural world. Planned giving is also easy. Many people have made bequests to Jocotoco through their will or trust, or by listing Jocotoco as a beneficiary on a life insurance or retirement plan.

Our Legacy Society is new but growing. Each year we will host unique events for the Legacy Society. Joining the Legacy Society is a great way to meet more people who care deeply about conservation.

David Agro, one of Jocotoco's founders and current board members, along with his wife, joined the Legacy Society earlier this year. David said, "Over the years working with Jocotoco and before that, I have been lucky to spend a lot of time in Ecuador: it has become a second home to me. Much of the success of Jocotoco is because of the amazing people of Ecuador. After starting our venture with no sure guarantee of success, communities have welcomed us, they have joined Jocotoco, and now conservation has become much more broadly adopted throughout the country. To help changes like this take root at a scale that can conserve biodiversity, ecosystems, and water for the long term, my wife and I have included Jocotoco in our estate planning. Long-term conservation will need continual support. We plan to do that by contributing to Jocotoco's endowment."

**Thank you to all of our Legacy Society members for caring so deeply about Jocotoco:**

- David Agro
- Frank and Susan Gilliland
- John Guarnaccia
- Heather Hodges
- John Moore
- Benjamin Olewine
- Robert Ridgely

Antisana. Photo Credit: James Muchmore



DAVID AGRO AND A SNOWY OWL



## DONATE TO JOCOTOCO

There are many ways that you can give to Jocotoco.

GO TO OUR WEBSITE AND CLICK DONATE

Fundación Jocotoco: [jocotoco.org](http://jocotoco.org)

Jocotoco US: [jocotococonservation.org](http://jocotococonservation.org)

You can also mail a check payable to:  
Jocotoco Conservation Foundation  
P.O. Box 38274  
Baltimore, MD 21231

We accept gifts of stock, donor advised funds, qualified charitable distributions from your IRA, and gains from crypto currency. You can also give to Jocotoco in your will or through other forms of planned giving.

Please contact Jajeane Rose-Burney, the Director of Jocotoco US, at 1 (716) 247-1255 or [jajeane.rose@jocotoco.org](mailto:jajeane.rose@jocotoco.org) if you have any questions about how to donate.

Jocotoco Conservation Foundation is a US tax-exempt non-profit organization, under the section 501(c)(3) of the Internal Revenue Code. All charitable donations are deductible to the full extent allowed by law. EIN: 83-2027203



CLICK HERE OR  
SCAN THE QR CODE  
TO DONATE

## MISSION AND VALUES

Our mission is to conserve Ecuador's biodiversity, especially its threatened species and ecosystems, guided by scientific evidence and local leadership.

Jocotoco strongly believes that nature has an intrinsic value, that wildlife has a right to exist with us. We act on our belief by creating protected areas and by supporting the conservation efforts of communities. Every year we discover new species, rediscover species thought to be lost forever, and bring species back from the brink.

We also believe in people. It is our incredible community of people who inspire us and who achieve conservation successes. We strive to provide opportunities for personal growth for everyone who works with us, and for the next generation of conservation heroes.

Our work is guided by treating others honestly, transparently, and fairly. We always strive for effectiveness and excellence.

